

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

|   |   |                      |
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| In the Matter of                              | ) |                      |
|   | ) |                      |
|   | ) |                      |
| GARMIN INTERNATIONAL, INC.                    | ) | WT Docket No. 01-339 |
|   | ) |                      |
| Amendment of Sections 95.193(a) and 95.631(d) | ) |                      |
| to Authorize Manufacture, Sale and Use of GPS | ) | RM - 10070           |
| Transmission Enhanced Family Radio Service    | ) |                      |
| Units   | ) |                      |
|   | ) |                      |
| Amendment of Section 95.193 (a), 95.193 (b),  | ) |                      |
| and 95.631(d) of the Commission's Rules       | ) |                      |
| Governing Permissible Communications in       | ) |                      |
| the Family Radio Service                      | ) |                      |

To the Commission:

**REPLY COMMENTS  
OF  
GARMIN INTERNATIONAL, INC.**

Garmin International, Inc. ("Garmin"), pursuant to the Notice of Proposed Rulemaking issued in the above-captioned proceeding<sup>1</sup> ("NPRM"), by its attorneys, hereby submits these Reply Comments in response to Comments filed by Northern California GMRS Users Group ("NCGUC"), Personal Radio Steering Group, Inc. ("PRSG"), and XM Radio Inc. ("XM Radio"). While suggesting certain revisions to the proposed rules, all of the parties filing support the proposal to allow Family Radio Service ("FRS") units to transmit a digital data emission and communications containing location information.

1. All the comments agree that the digital transmission of location information in the FRS is desirable and will benefit the public. While there were certain issues raised concerning the

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1. 67 *Fed. Reg.* 1710 (Jan. 14, 2002).

proposed rules, however, as discussed more fully below, the Commission should not consider these issues to be significant. Generally speaking, it must be recognized at the outset that the FRS rules are currently in place, and the FRS is operating very successfully in accordance with those rules. Interference concerns expressed in the Comments are really concerns relating to alleged interference from **existing** FRS operations, and there appears to be an attempt to have existing rules modified to alleviate some of this alleged existing interference. The comments filed fail to demonstrate that the proposal for digital transmission of location information as proposed by the Commission will cause any additional harmful interference problems.

2. Because of the “capture effect” of FRS radios, where the radios lock on to the strongest signal present, there is no difference between the currently authorized analog (voice) and the proposed digital modulations in terms of potential interference. In other words, if a user is going to transmit and that transmission is likely to cause interference, it makes no difference whether the transmission is digital (for data) or analog (for voice). In fact, the proposal, as contained in the NPRM, should serve to alleviate some congestion and interference related to FRS operations because users will not have to describe, discuss, question and give detailed directions to their location. Rather than a lengthy verbal inquiry and a verbal response, accurate location information can be sent in a data burst, lasting a very limited time of less than one second. Such a data burst will be hardly perceptible to an FRS user, and should assist in reducing traffic.

3. In addition, because of the power limitations on FRS transmissions, they only have a range of approximately two miles. Any interference, therefore, would be very limited in scope. Moreover, Garmin submits that there has been no demonstration that a data communication will cause any more or different interference than a voice transmission. Accordingly, wherever voice communications are permitted, the data transmission proposed will certainly not cause any

additional interference. Obviously, a quick digital transmission is much less intrusive from an interference perspective.

4. Furthermore, the Commission must recognize that the rule revisions proposed should not be overly limiting from a technological perspective. Communications and computer technologies are growing at a rapid pace and, as is evidenced by this rule making, what was extremely difficult or expensive to offer to the consuming public just a short while ago now becomes almost commonplace – or at least available at a reasonable cost to the consumer. The Commission must attempt to assure that any rules it adopts in this proceeding are not overly complex, and are far reaching enough to accommodate and encourage new technologies without the need for further rule making.

#### **NORTHERN CALIFORNIA GMRS USERS GROUP (“NCGUC”) COMMENTS**

5. The NCGUC Comments acknowledge that “location information transmission over FRS channels would be a benefit to the public . . . .”<sup>2</sup> While acknowledging these benefits, NCGUC raises some concerns that it feels the proposed rules fail to address. For example, NCGUC states that the proposed digital transmissions, using currently permissible bandwidths, can be expected to cause significant adjacent channel interference to GMRS repeaters.<sup>3</sup> In order to attempt to eliminate this interference, NCGUC suggests that FRS data transmissions be limited to FRS channels 1-7 only,<sup>4</sup> and that the bandwidth for FRS, F2D emissions be limited to 8 kHz.<sup>5</sup> Furthermore, NCGUC urges that data communications be “locked-out” in the presence of other transmissions, and should

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2. NCGUC Comments at 2.

3. *Id.* at 4.

4. *Id.*

5. *Id.* at 5.

only be permitted at random intervals.<sup>6</sup> Finally the NCGUC suggests that there need to be specific requirements to severely restrict how and when what specific buttons are pushed.<sup>7</sup>

6. In response to these suggestions, it should first be pointed out that under existing rules, certain FRS and GMRS frequencies are shared, and there is no guaranty of clear, or interference free communications. Garmin submits that if GMRS repeaters are suffering from adjacent channel interference, then the real solution to the problem is to improve GMRS repeater adjacent channel selectivity, not to impose strict occupied bandwidth limitations on FRS radios. Even though FRS channels have 25 kHz spacing,<sup>8</sup> current rules require that FRS radios be designed as if channel spacing were 12.5 kHz,<sup>9</sup> specifically to minimize interference with interstitial GMRS channels. It therefore appears the Commission has considered this problem previously and has provided a workable solution. NCGUC has not presented any reasons why FRS digital transmissions will be any more problematic for GMRS operations than voice transmissions. Accordingly, there is no need to revisit this issue merely because digital transmissions are being proposed.

7. The proposal to limit digital transmissions to FRS channels 1-7 would only serve to force communications on to only one-half of the available FRS channels. If users could only send

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6. *Id.* at 4-5. This 8 kHz limitation is opposed to the currently allowed 12.5 kHz bandwidth for voice emissions.

7. *Id.* at 6-7.

8. *See* 47 C.F.R. §95.627.

9. *See* 47 C.F.R. §95.633(c).

their digital location information on channels 1-7, they would be forced to use only those channels for voice communications because only radios on the same channels and squelch codes can communicate with each other. It would be much too difficult to have to switch channels back and forth for digital and voice communications. This proposal would have the effect of eliminating 7 FRS channels and causing even more congestion on the remaining FRS channels. Furthermore, if GMRS repeaters are already susceptible to interference from 467 MHz voice transmissions, then restricting FRS digital data transmissions containing location information to FRS channels 1-7 does not resolve the problem.

8. In a similar type of argument, NCGUC asserts that the bandwidth for FRS data transmissions should be limited to 8 kHz. Again, NCGUC is merely attempting to gain additional interference protection that it does not currently have. Because FRS and GMRS operate in a shared environment, GMRS must tolerate the consequences of existing rules, and NCGUC is not entitled to the limitations sought. In fact, there is no reason to limit F2D transmissions to 8 kHz because digital transmissions will cause no more interference than voice emissions. Accordingly, the Commission should remove the reference to F3E emissions in 95.633 (c), and provide an authorized bandwidth for FRS emissions.

9. As far as its assertions concerning interstitial voice interference, once again, because there is no requirement for this type of protection from voice communications now, Garmin sees no reason to have such protection from data communications. In fact, data communications would create much less potential for interference because the signal can only be less than one second long, and can not be repeated in any 10 second period. NCGUC also requests a random time interval before data transmission to avoid collision of data signals. Such a requirement appears to be frivolous because an FRS data transmission must already be initiated by the manual action of a user that is, by definition, random.

10. NCGUC introduces a confusing “push button” requirement.<sup>10</sup> First, as explained in Garmin’s Comments, the requirement for a manual button press is very limiting and this requirement should be expanded to require only some manual action of the user (*e.g.*, voice activation).<sup>11</sup> NCGUC argues that every data transmission must be manually initiated so as to avoid the use of FRS units in large transit fleets or in other industries requiring location determination capability. It must be kept in mind that the FRS radios have only an approximate two-mile radius. It seems inconceivable that “large transit fleets” or “industries requiring location determination” would rely on FRS radios. Actually, this is almost like arguing that voice communications on FRS should be limited because users will get on the air and never stop talking. Moreover, NCGUC comments that an FRS unit should not be allowed to poll another FRS unit are equally without merit. First of all, the purpose of allowing location data to be transmitted over FRS frequencies is to enhance the FRS service and provide additional safety assurances. If a user is unable to transmit his or her location information because he or she is injured or otherwise in jeopardy, it becomes a crucial safety factor to allow another unit to request that information.<sup>12</sup> No matter what the Commission specifies in its rules, there will always be some who will violate the spirit or the letter of the rules. However, it is not good policy, nor is it even possible, to attempt to adopt rules that will prohibit all possible violations. Rather, reasonable rules which benefit the public should be enacted. If these rules are violated or abused, then the Commission can institute enforcement action..

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10. NCGUC Comments at 6-7.

11. *See* Garmin Comments at 3-4.

12. *Id.* at 4-5.

## PRSG COMMENTS

11. PRSG alleges that the transmission of digital location information must be restricted because voice communications already make FRS channels unavailable in certain areas.<sup>13</sup> While Garmin will not dispute PRSG allegations, it is difficult to comprehend that 532 possible channels/squelch code combinations<sup>14</sup> could be completely filled.<sup>15</sup> Assuming this were true, at worst, the transmission of a less than one second digital message with location information would cause no more interference than another user attempting to send a voice transmission. In addition, because a digital data location message can be sent so much more quickly, efficiently and accurately, this transmission should cause a decrease in congestion because it would not be necessary to continue to talk and interrogate about a user's position. Garmin submits that the way the proposed rules are structured, to require the digital transmission to last less than one second and only be transmitted once in a ten second period, will help to relieve channel congestion. There is, therefore, no need to restrict FRS digital transmissions as proposed by PRSG.

12. PRSG's argument that there be mandatory voice communications between location data transmissions<sup>16</sup> appears to be illogical and inconsistent. If the FRS frequencies are already overcrowded as alleged, then why require additional voice communications? No voice communication can last less than one second and transmit complete location information. Furthermore, if someone is in danger or jeopardy, he/she should not be required to jump through

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13. PRSG Comments at §III.

14. 14 channels x 38 CTCSS tones = 532 combinations, *see* Garmin Comments at 5.

15. Assuming a minimum of 2 users per channel, this means that 1064 people would be listening/talking at any instant within a 2 mile radius.

16. PRSG Comments at ¶14.

hoops to make certain location information can be transmitted. The purpose of allowing these digital transmissions is to enhance the FRS, and provide a safety feature to the public.

13. The assertion that someone may abuse the digital transmission and continuously “press the button”<sup>17</sup> is equally without merit. This situation exists in the FRS today – someone could merely push and hold down the voice transmission button and continuously transmit some voice material. PRSG fails to demonstrate what is different about digital transmissions.

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17. *Id.*

14. PRSG attempts to introduce what amounts to a listen before talk (“LBT”) requirement on permissible FRS data transmissions.<sup>18</sup> The FRS rules do not require, nor does PRSG suggest that such a requirement be placed on voice transmissions. Voice transmissions are initiated on a “push to talk” basis. Because a digital burst would be much less harmful to other voice communications, there is no reason to impose the requested limitation on digital transmissions. Such a limitation would make the FRS enhanced radio more complex and expensive. Again, there is an attempt here to try to over-regulate the service.

15. Finally, Garmin believes that PRSG is attempting to make the proposed rules more complicated than necessary by requiring a unique unit identifier to be assigned to each radio. Garmin believes that it is much more simple and practical for the user to assign a unit name, at will, to the FRS enhanced radio. With a user assigned name, it would be simple to determine who is in the calling group’s party, and from which radio a location signal is generated. Even within a calling group, radios will be used by different individuals, at different times, so that there is no benefit to assigning a unit ID. This would require an inventory of radios before each use and some way to know who has which radio. This unnecessarily complicates matters and creates unnecessary regulation.

#### **XM RADIO’S COMMENTS ARE OUTSIDE THE SCOPE OF THIS PROCEEDING**

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18. *Id.* at §VII.

16. XM Radio Inc. (“XM Radio”) filed comments in this proceeding stating that XM “does not object to the Commission’s proposals . . . .”<sup>19</sup> Other than this statement concerning the instant proceeding, XM Radio uses its comments here to argue that the Commission should limit the out-of-band emissions from the Family Radio Service in the 2332.5 - 2345 MHz band to a field strength level of no more than 8.6  $\mu$ V/m at 3 meters measured in a 1 MHz interval.

17. Other than the one sentence of support for the NPRM, XM Radio’s comments have nothing to do with the instant proposal. Indeed, attached to XM Radio’s comments in this proceeding is a one inch thick set of comments and supporting documentation from another proceeding, ET Docket No. 01-278. If XM Radio would like to have the FRS rules amended concerning the fifth harmonic from FRS channels 8-14, then it should institute a rulemaking to attempt to have the rules modified. The instant proceeding is not a proper forum to resolve XM Radio’s problems with the FRS. This position is supported by numerous decisions of both the Courts and the FCC holding that for the Commission to consider comments in a rule making proceeding, the comments must be a “**logical outgrowth**” of the proposal and within the scope of the Notice.<sup>20</sup> Because there is no way that XM Radio’s comments could even be considered a logical outgrowth of the Commission’s NPRM, the comments should be disregarded for the purposes of this proceeding.

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19. Comments of XM Radio filed February 13, 2002 at 1.

20. See e.g., *Memorandum Opinion and Order*, (Southern Broadcasting of Pensacola, Inc.) \_\_\_\_\_ FCC Rcd. \_\_\_\_\_, 2001 FCC Lexis 6478 (Nov. 30, 2001); *Pinewood South Carolina*, 5 FCC Rcd 7609 (1990); see also *Weyerhauser Co. v. Costle*, 590 F. 2d 1011, 1031 (D.C. Cir. 1978); *Owensboro on the Air v. United States*, 262 F. 2d 702 (D.C. Cir. 1958).

## CONCLUSION

The Commission's proposal to allow FRS digital transmissions containing location data will clearly serve the public interest. Because the parties have not demonstrated how the FRS digital transmissions would differ from existing voice (analog) transmissions, the arguments in the Comments to restrict, in some manner, these digital transmissions should not be looked upon favorably by the Commission. These proposals to restrict the proposed digital transmissions are merely attempts to gain additional protection which is not currently available. Accordingly, the Commission should proceed to expeditiously adopt the rules as proposed in the NPRM consistent with the views expressed in Garmin's Comments and Reply Comments.

Respectfully submitted,

GARMIN INTERNATIONAL, INC.

By: /s/ Henry M. Rivera

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**CERTIFICATE OF SERVICE**

I, Kay Dallosta, a secretary in the law offices of Shook, Hardy & Bacon, L.L.P., hereby certify that a copy of the foregoing "Reply Comments of Garmin International, Inc." was served, this 28th day of February, 2002, by United States mail, First Class postage prepaid, upon the following:

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